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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,786	03/21/2006	Hans-Peter Miller	3590	3398

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EXAMINER	
MOK, ALEX W	
ART UNIT	PAPER NUMBER
2834	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/572,786	MILLER ET AL.	
	Examiner	Art Unit	
	ALEX W. MOK	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 July 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 July 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Amendment

1. Acknowledgement is made of Amendment filed July 23, 2009.

2. Acknowledgement is made of the amended drawings and specification submitted on July 23, 2009.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3, 4, 8-10, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. (US Patent Application Pub. No.: US 2003/0127920 A1) in view of Adachi et al. (US Patent No.: 5686780).

For claim 1, Yamazaki et al. disclose a regulator unit having a housing (see figure 3), in which the housing has a wiper contact mounting region with a guide and wiper contacts seated therein (reference numeral 121), having a regulator housing portion (reference numeral 122), in which an electronic controller unit and a regulator heat sink are received (reference numeral 127), having a plug element (reference numeral 126) for electrically connecting the regulator unit to external contact elements, and in which the regulator unit has a first through opening and a second through opening (see figures 3 and 4, reference numeral 136), by means of which openings the

regulator unit can be fastened to a housing (reference numeral 104) by means of two bolt elements (see figure 3), characterized in that the regulator heat sink is located between the wiper contact mounting region and the plug element (figure 3). Yamazaki et al. do not specifically disclose the wiper contact mounting region being located asymmetrically between the first through opening and the second through opening.

Adachi et al. disclose a wiper contact region (reference numeral 651) being located between the through openings (reference numerals 693, 613, see figure 10).

It would have been obvious to have the wiper contact mounting region be located asymmetrically between the first and second through openings as disclosed by Adachi et al. in the invention of Yamazaki et al., since such a configuration would provide increased spacing in the device and also improve cooling of the regulator unit.

For claim 3, Yamazaki et al. and Adachi et al. teach the claimed invention except for the guide of the wiper contact mounting region having a center line whose shortest spacing from the first through opening is at maximum 20 mm. Both Yamazaki et al. and Adachi et al. still disclose a wiper contact mounting region being spaced from an opening (Yamazaki et al., figures 3, 4; Adachi et al., figure 10), and it would have been obvious to a person of ordinary skill to have this spacing be a certain amount such as 20 mm for the purpose of enabling more air flow and improving the cooling action.

For claim 4, Yamazaki et al. and Adachi et al. teach the claimed invention as explained for claim 1, but do not specifically disclose the ratio of angular spacings between the first through opening and the center line of the wiper contact mounting region and the second through opening and the center line of the wiper contact

mounting region being between 5.2 and 6.0. The reference of Adachi et al. still disclose the spacing between the wiper contact mounting region and the two openings (see figure 10), and it would have been obvious to have the spacing in between the center line of the wiper contact mounting region and the first and second through openings have a ratio such as between 5.2 and 6.0 for the purpose of improving the air flow for cooling.

For claim 8, Yamazaki et al. illustrate the wiper contact mounting region with its guide, the regulator housing portion, and the plug element being integrally with one another a single housing part (see figure 3).

For claim 9, Yamazaki et al. illustrate a generator (figure 1), and the regulator unit fastened by means of two bolt elements to a rectifier heat sink and to a connection plate (reference numeral 136, see figures 3, 4).

For claim 10, Yamazaki et al. and Adachi et al. disclose the claimed invention except for the spacing between the first through opening and the axis of rotation being greater than the spacing between the second through opening and the axis of rotation by between 5% and 10%. Yamazaki et al. still show a spacing from the center (i.e. axis of rotation) to the first through opening and to the second through opening being different (see figures 3, 4), and it would have been obvious to have the bigger spacing be greater by a certain percentage such as 5% to 10% compared to the smaller spacing, since such a configuration would provide improved cooling for the unit.

For claim 13, Yamazaki et al. and Adachi et al. disclose the claimed invention except for the regulator housing portion having a spacing from the end plate between

0.5 and 5 mm. Yamazaki et al. already illustrate a spacing between the regular housing portion and the end plate (see figures 1, 3), and it would have been obvious to make this spacing from the end plate between 0.5 and 5 mm, and preferably between 1.8 and 3.2, since such a configuration would provide proper fastening of the regulator unit.

For claim 14, Yamazaki et al. disclose projections for the bolt elements (reference numeral 138, see figure 3), which can constitute bearing points for prestressing the bolt elements for fastening the regulator unit to the housing.

5. Claims 5, 6, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. and Adachi et al. as applied to claims 1, 9, and 10 above, and further in view of Kashihara et al. (US Patent No.: 6081054).

For claim 5, Yamazaki et al. and Adachi et al. teach the claimed invention except for an additional opening between the second through opening and the wiper contact mounting region. Kashihara et al. teach a regulator having additional through openings (see figure 1), and it would have been obvious to have this through opening on the regulator unit spaced from the other through openings at a certain distance such as within 11 and 36 mm, since such a configuration would further secure the regulator unit and efficiently cool the device.

For claim 6, the references of Yamazaki et al., Adachi et al. and Kashihara et al. teach through openings as explained for claims 1 and 5, therefore these openings would already have a surface for which a mounting element would make contact with (i.e. bearing face). Yamazaki et al., Adachi et al., and Kashihara et al. do not

specifically teach the bearing faces being spaced apart in the axial direction by up to 5 mm. Yamazaki et al. already teach the fastening points being at different levels in the axial direction (reference numeral 136, see figure 9) and it would have been obvious for a person of ordinary skill to have these fastening points spaced apart in the axial direction at a certain distance such as 5 mm since such a configuration would enable better positioning for securing the regulator unit.

For claims 11 and 12, Yamazaki et al., Adachi et al., and Kashihara et al. teach the claimed invention except for the fastening point serving the purpose of contacting and fastening to a connection plate and being located between the first through opening and the axis of rotation, and also the fastening point being located in a corridor amounting to between +3 and -3 mm. Kashihara et al. illustrate additional openings in figure 3 (i.e. fastening point), and Adachi et al. disclose components (reference numerals 613, 693, 619, see figure 11) which constitute the connection plate and the corridor. It would have been obvious to have the fastening point be located between the first through opening and the axis of rotation as taught by Kashihara et al. and Adachi et al. and also have the corridor amount to between +3 mm and -3 mm for the purpose of better securing the regulator unit.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. and Adachi et al. as applied to claim 1 above, and further in view of Bornet et al. (European Patent Document No.: EP 669696 A1).

For claim 7, Yamazaki et al. and Adachi et al. teach the claimed invention including the wiper contact mounting region being located between the first and second through openings (Adachi et al., see figure 10), but do not specifically disclose the plug element being located between the through openings. Bornet et al. disclose the plug element (reference numeral 90) being located between the through openings (reference numerals 20, 32, see figure 1). It would have been obvious to have the plug element located between the first through opening and the second through opening as taught by Bornet et al. in the inventions of Yamazaki et al. and Adachi et al., since this configuration of Bornet et al. would improve the air flow through the regulator and across the heat sink.

Response to Arguments

7. Applicant's arguments with respect to claims 1 and 3-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX W. MOK whose telephone number is (571)272-9084. The examiner can normally be reached on 7:30-5:00 Eastern Time, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen P. Leung can be reached on (571) 272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quyen Leung/
Supervisory Patent Examiner, Art Unit 2834

/A. W. M./
Examiner, Art Unit 2834